

WEST Search History

DATE: Wednesday, May 21, 2003

Set Name Query side by side

Hit Count Set Name result set

DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=ADJ

L20	l15 and (guide or guiding or rail)	17	L20
L19	l18 and (slide or sliding) near block	0	L19
L18	l15 and (slide or sliding or block)	24	L18
L17	L16 and (vacuum or suck or suction) near bridge	0	L17
L16	L15 and (vacuum or suck or suction)	18	L16
L15	l9 and (metal or metallic)	28	L15
L14	l1 and l12	35	L14
L13	l9 and intermediate	27	L13
L12	l9 and cycle	41	L12
L11	l9 and (laser or "e beam" or "e-beam" or energy beam or tool or head) near (weld or welding or cut or cutting or remove or removal or removing or ablate or ablation or ablating or excise or excising or excision)	19	L11
L10	L9 and ((water or plasma) near (jet or jetting) or sand near (blast or blasting) or sandblasting)	4	L10
L9	L8 and (transport or transporting or convey or conveyor or conveyance or belt)	59	L9
L8	l7 and (laser or "e beam" or "e-beam" or energy beam or tool or head) near (tilt or tilted or tilting or tiltable or pivot or pivoted or pivoting or pivotable or rotate or rotated or rotating or rotation or rotary)	88	L8
L7	l6 and (station or zone) near (form or forming)	2472	L7
L6	(laser or "e beam" or "e-beam" or energy beam) and (form or forming) and (station or zone)	54917	L6
L5	5140839 and (laser or beam or energy near beam)	5	L5
L4	5597433 and (laser or beam or energy near beam)	0	L4
L3	L1 and (laser or beam or energy near beam)	2	L3
L2	L1 and laser	1	L2
L1	0008773	82	L1

END OF SEARCH HISTORY

WEST☐ Generate Collection

L1: Entry 13 of 13

File: DWPI

Mar 19, 1980

DERWENT-ACC-NO: 1980-C6042C
DERWENT-WEEK: 198012
COPYRIGHT 2002 DERWENT INFORMATION LTD

TITLE: Laser cutting head attachment for punch press - has beam generator isolated from press and coupled to head tip via optical system

INVENTOR: CARBONE, V T; CLARK, S C

PATENT-ASSIGNEE:

ASSIGNEE

CODE

HOUDAILLE INDS INC

HOUD

SOC CHIM CHARBONNAGES SA

HOU1

PRIORITY-DATA: 1978US-0937754 (August 29, 1978)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 8773 A	March 19, 1980	W	000	
CA 1119673 A	March 9, 1982		000	
DE 2963887 G	November 25, 1982		000	
DK 7903589 A	March 31, 1980		000	
EP 8773 B	October 20, 1982	E	000	
US 31042 E	September 28, 1982		000	
US 4201905 A	May 6, 1980		000	

DESIGNATED-STATES: BE CH DE FR GB IT BE CH DE FR GB IT

CITED-DOCUMENTS: DE 2325173; DE 2419382 ; DE 2536573 ; DE 7327896 ; US 3696504 ; US 4063059

INT-CL (IPC): B21D 28/24; B23K 26/00

ABSTRACTED-PUB-NO: EP 8773A

BASIC-ABSTRACT:

The punch press has a central automatic control for the ram, turrets and workpiece feed, a vertically movable laser cutting head being carried by the main frame about the stationary section of the workable. The head includes an adjustable beam focussing optical system, and a hollow tip adjacent the bottom.

The laser beam generator is isolated from the machine to prevent vibration transmission, an optical system guiding the beam to the tip. The central control automatically alternatively controls the punch and laser, the control vertically moving the cutting head depending on the selection of laser operation.

TITLE-TERMS: LASER CUT HEAD ATTACH PUNCH PRESS BEAM GENERATOR ISOLATE PRESS COUPLE HEAD TIP OPTICAL SYSTEM

DERWENT-CLASS: P52 P55 X24